



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,630	06/23/2005	Uwe Boelz	58023US006	6706
32692	7590	09/04/2008		
3M INNOVATIVE PROPERTIES COMPANY			EXAMINER	
PO BOX 33427			DESAI, ANISH P	
ST. PAUL, MN 55133-3427			ART UNIT	PAPER NUMBER
			1794	
			NOTIFICATION DATE	DELIVERY MODE
			09/04/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com  
LegalDocketing@mmm.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/540,630	<b>Applicant(s)</b> BOELZ ET AL.
	<b>Examiner</b> ANISH DESAI	<b>Art Unit</b> 1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 04 June 2008.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 30-49 is/are pending in the application.
- 4a) Of the above claim(s) 30-38,43,44 and 49 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 39-42 and 45-48 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 11/25/05.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election with traverse of Group II claims 39-48 drawn to an adhesive tape and Species A in the reply filed on 06/04/08 is acknowledged. The traversal is on the ground(s) that if the claims are restricted then there would be additional burden on the Office and Applicant. This is not found persuasive for the reasons set forth in the previous Office Action. The requirement is still deemed proper and is therefore made FINAL. Accordingly, claims 30-38, 43, 44, and 49 are withdrawn from consideration.

***Claim Objections***

2. Claim 39 is objected to because of the following informalities: claim 39 depends from a non-elected claim 30. Appropriate correction is required.

***Information Disclosure Statement***

3. The information disclosure statement filed on 11/25/05 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. Specifically, the document DE 4402943A1 is in German language and no concise explanation of the relevance is provided. It has been placed in the application file, but the information referred to therein has not been considered.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 40-42 and 45-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 40 recites "wherein the crosslinked film backing", there is insufficient antecedent basis for the limitation of "crosslinked film backing".

***Claim Rejections - 35 USC § 102 or 103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 39-42 and 45-47 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Skipper (US 4,322,575).

7. Regarding independent claim 40, Skipper discloses a flame retardant cladding (backing) comprising crosslinked blend of a vinyl acetate/alkene copolymer that is blended with polylakene (see abstract, column 1 lines 1-22). Additionally, as to the claim requirement of melt flow index of the polymer or mixture of polymers prior to crosslinking, Skipper teaches "Of particular interests are the so-called liner low density

ethylene copolymers...described in UK patent application No. 7,911,916...the disclosure of which is incorporated herein by reference." (column 1 lines 60-65). It is noted that the aforementioned UK patent application is published as GB 2019412A (hereafter GB412A) (see copy provided by the Examiner). GB412A discloses a crosslinked low density liner polyethylene. Additionally, GB412A discloses copolymers of ethylene with acrylate, and copolymers of ethylene with vinyl acetate having melt index value at 190°C in the range of 0.1 to 70 (see page 2 lines 60 to page 3 lines 1-5). Further, Skipper discloses that flame retardant (thermally conductive fillers) such as aluminum oxides (alumina) in the amount of 10 to 400 parts by weight can be added to the cladding forming composition (see column 2 lines 64-68 to column 3 lines 1-25). Moreover, Skipper discloses that it is desirable to coat the cladding (backing) with adhesives such as PSA (column 4 lines 47-55).

8. With respect to claim 40, given that Skipper teaches what has been set forth above except for the claimed properties of the crosslinked film backing has an elastic torque S' of at least 3dNm. However, it is reasonable to presume that said property is present in the backing of Skipper. The support for said presumption is based on the fact that the film backings of Skipper and that of Applicant comprise one or more crosslinked polymer having a melt index as that of claimed by Applicant, and at least 60% by weight or more of thermally-conductive fillers. Therefore, the backings of Skipper and that of Applicant are structurally and compositionally equivalent. Thus, the presently claimed property would be present. The burden is respectfully shifted to Applicant to prove it otherwise (see *In re Fitzgerald*, 205 USPQ 594). In addition, the

presently claimed properties would obviously have been present once the backing of Skipper is provided (see *In re Best*, 195 USPQ at 433, footnote 4 CCPA 1977).

9. Regarding claims 41 and 42, it is noted that Skipper teaches polyolefin based polymers (column 1 lines 1-65) and at column 1 lines 57-60, Skipper teaches ethylene copolymers having greater than 50 weight percent ethylene.

10. Regarding claim 45, Skipper teaches flame retardants (thermally conductive filler) such as aluminum oxides at column 2 lines 64-67.

11. As to claims 46 and 47, although, Skipper does not explicitly teach the claimed properties of dielectric strength of the tape and the effective thermal conductivity, it is reasonable to presume that aforementioned properties are present in the invention of Skipper. The support for said presumption is based on the fact based reasoning as set forth above in the Section 8 with respect to the elastic torque.

12. Claim 48 is rejected under 35 U.S.C. 103(a) as obvious over Skipper (US 4,322,575) in view of Ono et al. (US 3,971,766).

13. Skipper is silent as to teaching the thickness of the adhesive tape is less than 300 micrometers as presently claimed. However, Ono discloses an adhesive tape. Further at column 4 lines 30-40, Ono discloses a coating of 40 micron thick adhesive layer (after drying) on the surface of a 100 micron thick backing (thus total thickness of the tape being 140 microns). Therefore, it would have been obvious to use the tape having total thickness of less than 300 micrometers, motivated by the desire to form a suitable adhesive tape.

14. Claims 39-42 and 45-47 are rejected under 35 U.S.C. 103(a) as obvious over Skipper (US 4,322,575) in view of GB 2019412A.

15. Regarding claims 40-42 and 45, the invention of Skipper is previously disclosed and it is incorporated here by reference.

16. It is noted that Skipper is silent as to teaching the melt flow index of the polymer or mixture of polymer prior to crosslinking is as claimed by the presently claimed invention. However, Skipper teaches "Of particular interests are the so-called liner low density ethylene copolymers...described in UK patent application No. 7,911,916...the disclosure of which is incorporated herein by reference." (column 1 lines 60-65). It is noted that the aforementioned UK patent application is published as GB 2019412A (hereafter GB412A) (see copy provided by the Examiner). GB412A discloses a crosslinked low density liner polyethylene. Additionally, GB412A discloses copolymers of ethylene with acrylate, and copolymers of ethylene with vinyl acetate having melt index value at 190°C in the range of 0.1 to 70 (see page 2 lines 60 to page 3 lines 1-5).

17. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the polymer or mixtures of polymers as taught by GB412A having melt flow index prior to crosslinking in the invention of Skipper, because Skipper desires such polymers.

18. With respect to the claimed properties of film backing having elastic torque, dielectric strength of the tape, and thermal conductivity of the tape, it is reasonable to presume that said properties are present in the inventions of Skipper as modified by GB412A. The support for said presumption is based on the fact that the film backings

and the adhesive tapes of Skipper as modified by GB412A, and that of Applicant comprise one or more crosslinked polymer having a melt index as that of claimed by Applicant, and at least 60% by weight or more of thermally-conductive fillers. Thus, the film backings and the adhesive tapes of Skipper as modified by GB412A, and that of Applicant are structurally and compositionally equivalent. Thus, the aforementioned properties would be present. The burden is respectfully shifted to Applicant to prove it otherwise (see *In re Fitzgerald*, 205 USPQ 594).

19. Claim 48 is rejected under 35 U.S.C. 103(a) as obvious over Skipper (US 4,322,575) in view of GB 2019412A (GB412A) as applied to claim 40 above, and further in view of Ono et al. (US 3,971,766).

20. Skipper is silent as to teaching the thickness of the adhesive tape is less than 300 micrometers as presently claimed. The invention of Ono is previously disclosed and it is incorporated here by reference. Thus, it would have been obvious to use the tape having total thickness of less than 300 micrometers, motivated by the desire to form a suitable adhesive tape.

#### ***Conclusion***

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH DESAI whose telephone number is (571)272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

Art Unit: 1794

22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

23. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. D./  
Examiner, Art Unit 1794

/Hai Vo/  
Primary Examiner, Art Unit 1794